#22/Reconsideration
THCBeH-Brown
8/22/01

PATENT

IBM/161

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Randall R. Schnier	Art Unit:	2152
Serial No.:	08/818,185	Examiner:	T. Vu
Filed:	March 14, 1997	Atty. Docket No.:	IBM/161

For: A BOOTSTRAPPING TECHNIQUE FOR DISTRIBUTED OBJECT CLIENT SYSTEMS

RESPONSE

Assistant Commissioner for Patents
Washington, DC 20231

Sir:

This paper is submitted in reply to the Office Action dated May 14, 2001, within the three month period for response. Reconsideration and allowance of all pending claims are respectfully requested.

In the subject Office Action, all of the pending claims (claims 1-9, 11, 15-36 and 39 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,151,637 to Phillips et al. in view of Kessler et al., "Remote Objects for Java". Applicant respectfully traverses the Examiner's rejections to the extent that they are maintained.

As an initial matter, Applicant notes that of the art now cited against the claims in remarkably similar to other art that has been used in rejections that Applicant has already overcome during prosecution. In particular, the passage cited in Phillips et al. is essentially the same as a passage in U.S. Patent No. 5,857,100 to Phillips et al., which was previously relied upon in rejecting the claims in the Office Action dated May 18, 2000. Moreover, Kessler et al. appears to disclose essentially the same material as the Orchard reference, which was also relied upon in rejecting the claims in the aforementioned Office Action. As such, it appears that the new rejections are essentially restatements of the previous rejections. And as Applicant apparently overcame the prior rejections, Applicant is now perplexed as to why the Examiner is now again rejecting the claims on this basis.

Turning now specifically to the rejection of claim 1, this claim recites an apparatus including a computer program that enables client object-server object interaction for a client

object located on a zero install client. The client object-server object interaction is enabled by delivering an object reference for a naming context object to said zero install client after said zero install client has contacted said computer program.

As discussed, for example, at pages 14 and 15 of the application, the claimed invention addresses the specific problem associated with "bootstrapping" a zero install client to permit the client to work with one or more object servers. In particular, the invention recited in claim 1 operates by delivering an object reference for a naming context object to the client after the client has contacted the computer program. As is further discussed on the cited pages, such bootstrapping is necessary to permit a Naming Context Object (NCO) to be accessed for the purpose of providing a directory of objects that may be accessed from a server by a client.

Conventional client-server systems require that an Object Request Broker (ORB) client be installed on a client computer, with an object reference to the NCO installed within the ORB client. However, with a zero install client, it is desirable for the ORB client to be downloaded only as necessary in connection with a request to access the client-server system. In this context, the claimed invention facilitates such on-demand bootstrapping of an ORB client by delivering an object reference for a naming context object after a zero install client has initiated an interaction.

In rejecting claim 1, the Examiner relies on the combination of Phillips et al. and Kessler et al. However, Applicant respectfully submits that the claimed combination of references does not disclose or suggest each and every limitation of claim 1. Most notably, the cited references fail to disclose or suggest delivering an object reference for a naming context object to a zero install client after the client has contacted the computer program that delivers such object reference.

Phillips et al., in particular, discloses only that conventional object naming services may be used in a distributed object system. Phillips et al., however, is silent as to any bootstrap function, much less any bootstrap function where an object reference for a naming context object is delivered to a zero install client.

The Examiner cites col. 7, line 55 to col. 8 line 63, yet contrary to the Examiner's assertions, Applicant can find no reference in this passage of "enabling client object-server object

interaction for an [sic] client object located on a (zero install) client," or "delivering an object reference for an [sic] naming context object to said (zero install) client after said zero install client has contacted said computer program." (Office Action, ¶ 3), as alleged by the Examiner. The cited passage does not even discuss zero install clients, so Applicant respectfully submits that the cited passage is irrelevant to claim 1.

Next, while the Examiner admits that Phillips et al. is silent on the detail of a zero install client, the Examiner relies on Kessler et al. for allegedly disclosing, at pages 13-19, that the client browser interacts with a server by applet, and using an ORB naming service to obtain an object reference.

The fact that the Examiner relies on Kessler et al. for disclosing using an ORB naming service to obtain an object reference illustrates that the Examiner does not fully comprehend precisely to what Applicant's claim is directed. As discussed above, the claim focuses on delivering an object reference for a naming context object. By doing so, subsequent attempts to obtain object references for other objects with which a client might wish to access can proceed by accessing the naming context object (or more specifically a proxy to that object) to obtain such object references. To do so, a client is required to have available the object reference for the naming context object.

The Examiner's argument, however, at ¶ 3 of the Office Action that Kessler et al. discloses "the zero install client including the client browser interacts to server by applet, ORB naming service to obtain object reference," focuses on obtaining object references from a naming context object, and not for a naming context object. In this regard, it is important to note that the use of a naming context object to retrieve object references for other objects is precisely the function of a naming context object. The claimed invention, however, focuses on obtaining an object reference for the naming context object itself, and the rejection fails to address this important aspect of Applicant's claimed invention.

Applicant also respectfully submits that Kessler et al., as with Phillips et al., does not disclose or suggest delivering an object reference for a naming context object to a zero install client after being contacted by the client. Kessler et al. does disclose that a Java enabled browser can fetch (1) an applet, (2) a stub class for IDL object reference, and (3) ORB and ORB naming

services. However, the mere fact that Kessler et al. discloses that such information is downloaded does not clearly teach to one of ordinary skill in the art that any form of object reference for a naming context object is delivered after a zero install client has contacted a computer program, as is required by claim 1.

In fact, Kessler et al. is silent as to how an object reference for a naming context object is obtained by a client. In particular, in step 2 of the installation routine, which is illustrated at page 15 of Kessler et al., the reference states:

> Applet creates target for lookup of remote service. Fetches stub class for IDL object reference[1].

Then, as illustrated at page 16, in the next step (step 3):

> Applet uses ORB naming service to find IDL object reference for remote service. Fetches classes for Java ORB.

Exactly how the object reference for the ORB naming service is obtained, however, is not disclosed by the reference. In order to render a claimed concept obvious, a reference must clearly and unambiguously teach that concept to one of ordinary skill in the art. An ambiguous disclosure such as this therefore falls far short of clearly teaching this particular concept. As such, the Examiner has failed to meet the burden of establishing that Kessler et al. discloses the recited transmission of an object reference to a naming context object. Therefore, Kessler et al. adds nothing to the Examiner's rejection.

Moreover, even if the combination of references did disclose each and every feature of Applicant's claimed invention, Applicant respectfully submits that the Examiner has failed to raise a *prima facie* case of obviousness, as it appears the Examiner has simply aggregated

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[1]A "stub class" is defined in Kessler et al. at page 10: "Client operates on IDL object reference as local object. Stub marshals arguments for transmission to server." While the Examiner has not alleged that a stub class is analogous to a naming context object, even if the Examiner did take this position, it is clear from this definition that such an analogy would be incorrect.

disparate teachings of the references without establishing any suggestion or motivation on the part of the prior art to make the combination. There is no suggestion in any of the cited references of the particular problem addressed by Applicant's claimed invention, nor of any particular solution to that problem. Applicant therefore respectfully submits that the Examiner has relied on hindsight in making the rejection, and thus, the rejection cannot be maintained.

As such, Applicant respectfully submits that claim 1 is non-obvious over the prior art of record. Reconsideration and allowance of claim 1, as well as claims 2-6 which depend therefrom, are therefore respectfully requested.

Next, with respect to independent claim 7, this claim recites in part the downloading of an object reference for a naming context object from a server system to a client system after the client system has contacted the server system, where the client system is a zero install client. Likewise, claim 21 recites a computer program that delivers an object reference for a naming context object to a zero install client after being contacted by the zero install client. Claim 28 recites in part an applet used to retrieve an object reference for a naming context object from a server. In each of these claims, therefore, an object reference to a naming context object is being transmitted to a client. As such, for the same reasons as presented above with respect to claim 1, these claims are distinguishable from the prior art of record. Reconsideration and allowance of claims 7, 21 and 28, as well as claims 8-9, 11, 15-20, 22-27 and 29-32 which depend therefrom, are therefore respectfully requested.

Next, with respect to independent claims 33 and 34, these claims recite in part the concept of transmitting an object reference to a naming context object in response to a request by a web browser.

As discussed above with respect to claim 1, the cited art fails to disclose or suggest the transmission of an object reference for a naming context object from a server to a client. Moreover, specifically with regard to these two claims, the fact that the object reference is requested by a client such as a web browser is also not disclosed or suggested by the prior art of record. None of the cited references, and most notably Kessler et al., address the transmission of an object reference for a naming context object in response to a specific request by a client. In the illustrated implementation of the invention, it is in part this functionality that supports the

ability for a zero install client to be effectively bootstrapped without special configuration by a user. The client-side request for an object reference to a naming context object also greatly facilitates the bootstrapping procedure insofar as the maintenance of the object reference is simplified in the server, so that client requests to the server will result in the most current object reference being returned to those clients. Applicant therefore respectfully submits that the cited art fails to disclose or suggest this claimed feature. Reconsideration and allowance of claims 33 and 34, as well as claims 35-36 and 39 which depend therefrom, are therefore respectfully requested.

In summary, Applicant respectfully submits that claims 1-9, 11, 15-36 and 39 are novel and non-obvious over the prior art of record. Reconsideration and allowance of all pending claims are respectfully requested. If the Examiner has any questions regarding this paper, or which might otherwise further this case onto allowance, the Examiner may contact the undersigned at (513) 241-2324. Moreover, if any other charges or credits are necessary to complete this communication, please apply them to Deposit Account 23-3000.

Respectfully submitted,

14 AUG 2001
Date

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2152

PATENT
Att'y Docket No. IBM/161/124
Confirmation No. 9188

CERTIFICATE OF MAILING UNDER 37 C.F.R. 1.8

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, postage prepaid in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231 on: August 14, 2001.

Scott A. Stinebruner Reg. No. 38,323 14 AUG 2001 DATE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Assistant Commissioner for Patents
Washington, DC 20231

AMENDMENT TRANSMITTAL

1. ☒ **Transmitted herewith is a Response.**

2. ☐ Small Entity status of this application under 37 CFR 1.9 and 1.27 has been established by a verified statement previously submitted.

   ☐ Enclosed is a verified statement to establish Small Entity status

   ☒ **Other than a Small Entity**

3. **The fee has been calculated as shown below:**

CALCULATION OF FEES

Fee:	Number of Claims After Amendment:		Previously Paid For:	No. Extra:	At Rate:	Amount:
Total Claims	33	minus	33	0	$18	$0.00
Independent Claims	6	minus	6	0	$78	$0.00
MULTIPLE DEPENDENT CLAIM FEE					$260	$0.00
TOTAL FEE FOR CLAIMS:						$0.00

☒ **No additional fee for claims is required.**

4. ☐ Attached is a check in the sum of $_____ for additional claims.
☐ Please charge my Deposit Account No. 23-3000 in the amount of $_____.

5. The proceedings herein are for a patent application and the provisions of 37 CFR 1.136 apply. Complete (a) or (b) as applicable.

☒ **(a) Applicant petitions for an extension of time under 37 CFR 1.136 for the total number of months checked below:**

	Ext. Mos.	Large entity	Small entity
☐	one month	$ 110.00	$ 55.00
☐	two months	$ 380.00	$ 190.00
☐	three months	$ 870.00	$ 435.00
☐	four months	$1,360.00	$ 680.00
☐	five months	$1,850.00	$ 925.00

Extension fee due with this request: $_____

Method of Payment: Check enclosed in the amount of $_____

If an additional extension of time is required, please consider this a petition therefor.

(Check and complete the next item, if applicable)

☐ An extension for ____ months has already been secured and the fee paid thereof of $____ is deducted from the total fee due for the total months of extension now requested. Extension fee due with this request $____.

OR

☒ **(b) Applicant believes that no extension of term is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition for extension of time.**

6. ☒ If any additional fee for claims or extension of time is required, charge Account No. 23-3000.

Respectfully submitted,

WOOD, HERRON & EVANS, L.L.P.

By: _____
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Enclosed:
Amendment Transmittal (in duplicate) containing Certificate of Mailing under 37 C.F.R. 1.8
Response
Reply Postcard